

Summary of School Interior Sampling Results and Proposed Action

Sampling

- Sampling events were conducted in March and in June 2018. The March event sampled Head Start, Lincoln Elementary, Moodry Middle, Anaconda High, and Memorial Gym. The June event resampled areas of heavy dust concentrations at the schools and sampled the closed Dwyer School and the Administration Building.
- EPA concentrated on classroom and hallways, areas where children spend the majority of time and have the greatest potential of exposure.
- Floor dust samples were collected with a High Volume Small Surface Sampler (HVS3) and surface dust samples were collected by a micro-vacuum technique.
- Floor dust samples were collected from hard flooring and carpet, as well as floor mats placed at school building entrances using the HVS3 sampling apparatus.
- Samples from horizontal surfaces in classrooms, hallways and offices (e.g., shelves, desks, file cabinets), and other locations (e.g., boiler rooms, storage areas) were collected using a micro-vacuum technique. During the March 2018 samplings event, samples collected by micro-vacuum were determined to be unusable due to low sample mass.
- In June 2018, the EPA resampled areas that were not frequently cleaned and had the greatest likelihood of having historic smelter-related dust deposition (such as boiler rooms, basements, roof accesses, and attics) at the Head Start, Anaconda High School, Lincoln Elementary, Memorial Gym, and Moodry Middle School.

Results

- Samples results were compared to the Anaconda residential soil action levels: 250 mg/kg arsenic (As) and 400 mg/kg lead (Pb).
- There were NO EXCEEDANCES of action levels in the classrooms, hallways or areas where children spend the majority of their time. This demonstrates that maintenance staff are doing a great job and are largely responsible for low levels of dust in the child accessible areas of the active schools.
- None of the floor mat samples collected exceeded action levels. This demonstrates that smelter related material is not being tracked into the schools.
- Exceedances, of primarily lead, were found in many of the historic dust samples. These appear to be from lead based paint (due to the absence of similarly elevated arsenic levels). This is to be expected due to the age of the schools and the historic use of lead paint. Similar results would be expected in similar aged schools in non-smelter communities.

- Exceedances of both arsenic and lead were found in the attics of the Head Start and Dwyer Primary Schools and appear to be consistent with smelter emissions.

Proposed Actions

- Lincoln Elementary School. No Action.
- Moodry Middle School. Surface dust collected from the beams in the store room beneath the bleachers exceeded the lead action level (122 mg/kg As, 573 mg/kg Pb). The store room is 20' x 50' = 1,000 sq. ft. There are four beams that follow the contours of the bleachers with a maximum height of about 15' down to about 3'. The beams and the horizontal surfaces of the stored items will be HEPA-vacuumed and/or wet wiped. The floor will be cleaned using Kleen Sweep compound. EPA plans to clean this area first.
- Anaconda High School. A sample collected on top of a glass hatch exceeded action levels (1,030 mg/kg As, 772 mg/kg Pb). Further inspection showed that there may have been a penetration up through the roof at one time, but this is now sealed. Also, there is a rectangular shaft about 20 feet long that appears to perhaps been connected to the overall building ventilation system, but it is also now sealed. The glass hatch will be removed, wrapped in plastic, and disposed of. A replacement hatch will be made from plywood and painted white. The lip of the hatch and the reachable portion of the shaft will be HEPA-vacuumed.
- Memorial Gym. Sample results above lead action levels were found on the dust on the I-beams in the gymnasium area (30.5 mg/kg As, 502 mg/kg Pb) and on the beams in the storage areas below the bleachers (128 mg/kg As, 515 mg/kg Pb). The top seats of the bleachers are reachable by fans, thus contact with dust containing lead is possible. The reachable extent of the I-beams (approximately 10-15 feet from the I-beam ends) in the gymnasium will be HEPA-vacuumed and/or wet wiped. A total of 28 I-beams will be cleaned. Three under-bleacher store rooms will be cleaned with the beams/supports and horizontal surfaces of stored items will be HEPA-vacuumed and/or wet wiped. The floors will be cleaned using Kleen Sweep compound.
- Dwyer Primary School. In the basement, the dust on top of the ceiling tiles (19 mg/kg As, 674 mg/kg Pb) and in the boiler room (30 mg/kg As, 1310 mg/kg Pb) were above the lead action level. On the first floor, the dust on top of two air handlers located on the sides of the stage (54 and 55 mg/kg As, 582 and 555 mg/kg Pb), the attic above the main hallway (296 mg/kg As, 547 mg/kg Pb), and on the top of pipes in a pipe hatchway (40 mg/kg As, 732 mg/kg Pb) exceeded action levels. In the portable classroom building, the horizontal hard surfaces in the south classroom (52 mg/kg As, 1240 mg/kg Pb) were above the lead action level. Surfaces will be HEPA-vacuumed and/or wet wiped and hard floors cleaned using Kleen Sweep compound in the boiler room and adjacent store room. Atlantic Richfield will clean the attic above the main hallway.
- Administration Building. In the Administration Building, the dust on top of the joists in the basement (301 mg/kg As, 397 mg/kg Pb), and the pipe chases (67 mg/kg As, 3,520 Pb) and Room 6 & 7 vent grills (178 mg/gk As, 643 mg/kg Pb) exceeded action levels. Cleaning in the basement will consist of HEPA-vacuuming and/or wet wiping the joists (160' long x 5" wide x 2 joists = 133 sq. ft.) and miscellaneous horizontal surfaces (e.g., tables, tops of ductwork where accessible,

stairs, air handlers, chairs, etc.), and cleaning the floor with Kleen Sweep compound (160' x 36' = 5,760 sq. ft.). On the first floor, the grills in Rooms 6 & 7 will be HEPA-vacuumed and/or wet wiped. Since they are generally inaccessible, the two pipe chases in the hallway will have no action.

- Head Start. The only sample to exceeding an action level was the sample collected in the attic (378 mg/kg As, 483 mg/kg Pb). The attic area is approximately 36' x 72' = 2,592 sq.ft. Atlantic Richfield will clean this attic.

Schedule

EPA plans to clean areas with elevated interior dust, starting with the active schools, beginning the week of August 20th. EPA will coordinate with ASD maintenance staff for access.

Atlantic Richfield will coordinate with ASD maintenance staff to access the attic at the Dwyer Primary School and with Anaconda-Deer Lodge County for access to the Head Start attic.

Atlantic Richfield will also coordinate with ASD regarding any required exterior soil cleanup.

-It is important to note that the sample results were compared to residential screening numbers, which is very conservative and assumes essentially a 24hr/day 7day a week exposure. A more accurate school exposure scenario would probably be 10hrs/day, 5day/week for a school child and would have a very different and much higher screening numbers.

-it is recommended that due to Pb paint dust and possible smelter related dust, that best management practices be used by maintenance staff when accessing or working in areas that have large amounts a dust and have been relatively undisturbed for long periods of time.